

Smith Systems, Inc.
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Brevard, NC 28712
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Rev. 6 July 2017



Quality Products for Locomotives, Trolley and Transit Cars

Speed, Motion, and Temperature Sensors, Interconnect Cables and Harnessing



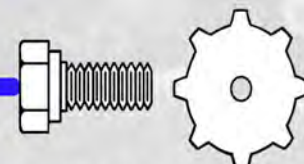
**Thousands of Applications
One Source
Designed to Survive**



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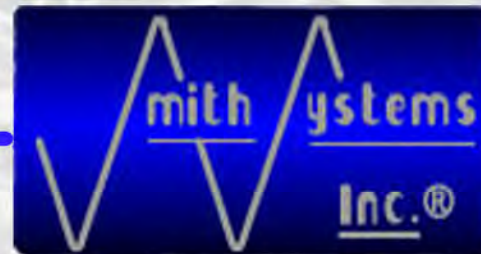


ISO 9001 Registered IRIS Certified



Some included sensors are protected under U.S. numbers 8,258,780; 5,006,797;
CA Patent numbers 2,295,649; 2,676,761 European Pub. No. 1000321A and other patents pending

We can design and manufacture alternatives to most OEM speed and temperature sensors. Call us with your specifications and let us create a new solution for your sensing needs.



Locomotive Traction Motor Speed Sensors and Anti-Slip/Slide Sensors



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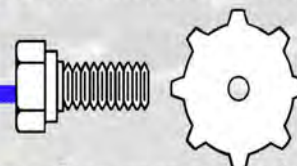
- Patented three- piece take-apart design or newly released one-piece model
- Multi-piece unit decreases change-out downtime for any of the three separate pieces
- One-piece unit saves you more than half of the initial cost
- Both models are less expensive than OEM products
- Both models offer the same electronics performance and protection features
- Replacement traction motor sensors for Dash 7, Dash 8, Dash 9, and for Narrow Gauge Locomotives



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Also Available:

- Replacements for Lenord+Bauer GEL 247 Series
- All single and multi-channel models with overmolded transitions



Rugged Designs Built to Withstand the Rail Environment!

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Active Single and Dual Channel Speed Sensors

- Large operating gap
- Polarity and transient protection
- RFI & EMI protection
- Zero speed capability (can be used to indicate Positive Train Stop)
- Available in:
 - single channel
 - dual channel
 - with quadrature output
 - with direction logic
 - molded thermoplastic housing or stainless steel



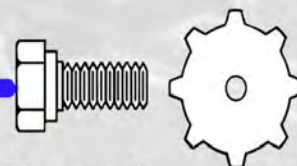
Mating Cables and Signal Harness to Complete Your Reliable Under Car Assembly

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- Millions of track miles!
- Waterproof EZ-change
- Over-molded connectors
- Optional color coding for easy pairing of sensor and mating cable assembly
- Great low temperature flexibility

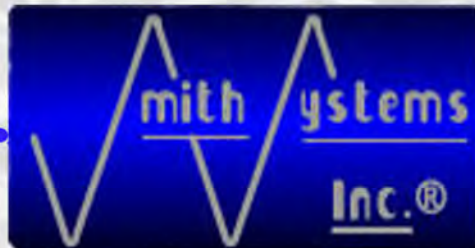


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Providing Performance and Reliability for Over 30 Years!

**Speed, motion, and temperature sensors
designed to survive and customized to fit
your operating environment.**



**Temperature Sensors
For Fluids, Air, Gases, etc...**

Existing applications include:

- Rail car journal bearings
- Locomotive traction motor output bearings
- HVAC systems-air and coolant
- Transmission/gearbox oil temp



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Thermistor or RTD elements in multiple housings/terminations
Patented 360 degree cable exit option always available

We manufacture a variety of both passive and active speed sensors-- optional housings, cable/cable protection configurations and terminations



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